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**REMARKS**

The specification and the claims have been amended, as suggested by the Examiner.  
No new matter has been entered by any of the foregoing amendments.

Claims 7-12 have been amended to correct minor informalities and to employ more idiomatic English. Thus, it is believed that the Examiner's several objections as to the claims have been overcome.

The rejection of claims 7-12 under 35 USC §102 as anticipated by Hogeboom (U.S. Patent No. 6,194,949) is in error. Hogeboom does not teach a pair of push-pull circuits. A push-pull circuit is defined in The Illustrated Dictionary of Electronics, Eighth Edition, p. 564 (copy of p. 564 enclosed) as "A symmetrical circuit in which two active devices operate on separate halves of the input-signal cycle and deliver a combined output signal." In Hogeboom the gates of each MOS transistor receive a different signal from each of the NAND or gates. Nowhere does Hogeboom teach two devices operating on separate halves of a single input cycle. Thus, Hogeboom cannot teach a pair of push-pull circuits as is required by Applicant's claims 7, 9 and 11, and all claims that depend therefrom.

New dependent claims 13, 16 and 19 are allowable over the art for the same reasons above adduced relative to independent claims 7, 9 and 11, and are also patentably distinguished from the art because, in the cited patent to Hogeboom, the gates of transistor 71 and 81 are controlled by a voltage which is dependent on the drain voltage of the transistors 70 and 71 and the drain voltages of the transistors 80 and 81.

New dependent claims 14, 15, 17, 18 and 20-23 are similarly allowable over the art for the same reasons above adduced relative to independent claims 7, 9 and 11, and are also

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patentably distinguished from Hogeboom because, in Hogeboom, the current which is flowed by the transistor 71 and the current which is flowed by the transistor 81 are not constant current but which vary according to the variable voltage of the line 230.

Having dealt with all the objections raised by the Examiner, the Application is believed to be in order for allowance. Early and favorable action are respectfully requested.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account Number 08-1391.

Respectfully submitted,



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**purity magnet** A ring-magnet collar around the neck of a color-television picture tube to adjust, by rotation, color purity.

**purple plague** Corrosion that occurs when aluminum and gold are placed in contact.

**pushbutton tuner** A radio or television tuner utilizing pushbutton tuning.

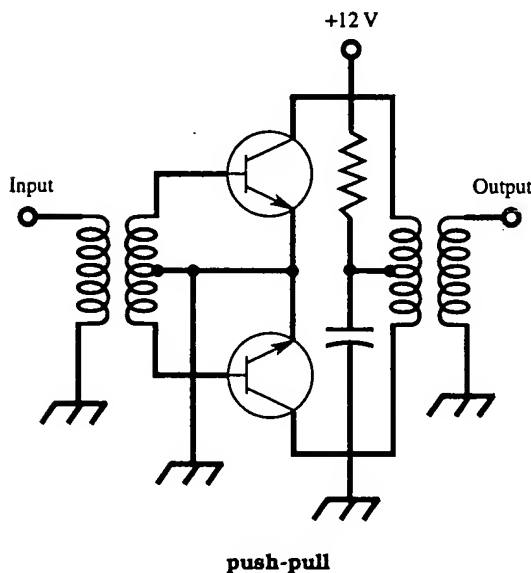
**pushbutton tuning** The tuning of a circuit to various frequencies in single steps by means of pushbutton switches.

**pushdown list** In data processing, a method of amending a list. A new item entered at the top moves each existing item one position down.

**pushdown stack** Also called *first-in/last-out*. A digital read-write memory in which data bits emerge in reverse sequence from the order they go in. If data bit *x* enters the pushdown stack before data bit *y*, then *x* will come out after *y*. Compare FIRST-IN/FIRST-OUT.

**push-in terminal** A circuit contact or tie point, usually of thin, springy material, that can be inserted into a hole in a perforated board.

**push-pull** Pertaining to a circuit in which two active devices are used, with the inputs and outputs both placed in phase opposition. In the output circuit, even harmonics are canceled, and odd harmonics are reinforced.



**push-pull amplifier** An amplifier stage in which, for increased power output, two active devices are operated 180 degrees out of phase with each other in opposite halves of a symmetrical circuit. Also see PUSH-PULL CIRCUIT.

**push-pull circuit** A symmetrical circuit in which two active devices operate on separate halves of

the input-signal cycle and deliver a combined output signal.

**push-pull deflection** In an oscilloscope, the application of deflection voltage to a pair of deflecting plates 180 degrees out of phase with each other. For this purpose, the output amplifier in the horizontal or vertical deflection channel is a push-pull stage.

**push-pull doubler** See PUSH-PULL MULTIPLIER.

**push-pull microphone** A set of two microphones, in which the audio-frequency outputs are in phase opposition.

**push-pull multiplier** A push-pull amplifier with its output circuit tuned to an odd-numbered multiple of the input frequency. This circuit is unsuitable for even-harmonic operation, but has some merit as an odd-harmonic multiplier (e.g., a tripler or quintupler). Also see PUSH-PUSH MULTIPLIER.

**push-pull oscillator** An oscillator stage in which, for increased power output, two active devices are operated 180 degrees out of phase with each other in opposite halves of a symmetrical circuit. Also see PUSH-PULL CIRCUIT.

**push-pull/parallel amplifier** An amplifier stage in which tubes or transistors are connected in push-pull/parallel for increased power output. Also see PARALLEL-COMPONENT AMPLIFIER, PUSH-PULL AMPLIFIER, and PUSH-PULL/PARALLEL CIRCUIT.

**push-pull/parallel circuit** A push-pull circuit in which two or more active devices are connected in parallel on each side of the circuit. This arrangement gives increased power output over that of the conventional push-pull circuit. See, for example, PUSH-PULL/PARALLEL AMPLIFIER and PUSH-PULL/PARALLEL OSCILLATOR.

**push-pull/parallel oscillator** An oscillator stage in which active devices are connected in push-pull/parallel for increased power output. Also see PARALLEL-COMPONENT OSCILLATOR, PUSH-PULL OSCILLATOR, and PUSH-PULL/PARALLEL CIRCUIT.

**push-pull recording** A type of film sound track consisting of two side-by-side images 180 degrees out of phase with each other.

**push-pull transformer** A transformer having a center-tapped winding for operation in a push-pull circuit.

**push-push** Pertaining to a circuit in which two active devices are used, with the inputs connected in phase opposition, and the outputs connected in parallel. The result is reinforcement of the even harmonics, and cancellation of the fundamental frequency and all odd harmonics.

**push-push circuit** See PUSH-PUSH MULTIPLIER.

**push-push multiplier** An amplifier circuit containing two active devices with their inputs connected in phase opposition and their outputs connected in parallel. This circuit is unsuitable for fundamental-frequency and odd-harmonic operation.

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